

WHAT IS CLAIMED IS:

- 1 1. A silane-containing polyvinyl alcohol comprising a completely
2 hydrolyzed or partially hydrolyzed vinyl ester copolymer having a degree of
3 hydrolysis of from 75 to 100 mol%, obtained by free radical polymerization of
 - 4 a) one or more vinyl esters of straight-chain or branched alkane
5 carboxylic acids having 1 to 18 carbon atoms, of which an
6 amount of from 1 to 30 mol%, based on total polymer, are
7 one or more 1-alkylvinyl esters of C₁₋₆ carboxylic acids,
8 where the 1-alkyl groups are C₁₋₆ alkyl radicals;
 - 9 b) from 0.01 to 10 mol% of one or more silane-containing,
10 ethylenically unsaturated monomers, and
 - 11 c) optionally further comonomers copolymerizable therewith,
12 and hydrolysis of the polymers obtained thereby.
- 1 2. The silane-containing polyvinyl alcohol of claim 1, wherein
2 the vinyl ester a) comprises vinyl acetate.
- 1 3. The silane-containing polyvinyl alcohol of claim 1, wherein
2 the 1-alkylvinyl ester comprises 1-methylvinyl acetate.
- 1 4. The silane-containing polyvinyl alcohol of claim 1, having a
2 Höppler viscosity according to DIN 53015, as 4% by weight aqueous solution of
3 from 2 to 50 mPas.
- 1 5. The silane-containing polyvinyl alcohol of claim 1, wherein
2 at least one silane-containing, ethylenically unsaturated monomers is selected from
3 the group consisting of ethylenically unsaturated silicon compounds of the general
4 formula $R^1SiR_{0.2}^2(OR^3)_{1.3}$, in which each R¹ is independently CH₂=CR⁴-(CH₂)_{0.1} or
5 CH₂=CR⁴CO₂(CH₂)_{1.3}, each R² independently is a C₁- to C₃-alkyl radical, C₁- to C₃-
6 alkoxy radical, or halogen, each R³ independently is an optionally branched,
7 optionally substituted C₁₋₁₂ alkyl radical or a C₂₋₁₂ acyl radical R₃ optionally be

8 interrupted by an ether group, and each R^4 is independently H or CH_3 , and a
9 (meth)acrylamide containing silane groups of the formula $CH_2=CR^5-CO-NR^6-R^7-$
10 $SiR_m^8-(R^9)_{3-m}$, in which $m = 0$ to 2 , each R^5 is independently H or a methyl group,
11 each R^6 is independently H or a C_{1-5} alkyl group, each R^7 is independently a C_{1-5}
12 alkylene group or a bivalent organic group in which the carbon chain is interrupted
13 by an O or N atom, each R^8 is independently a C_{1-5} alkyl group, and each R^9 is
14 independently a C_{1-40} alkoxy group optionally substituted by further heterocycles.

1 6. The silane-containing polyvinyl alcohols of claim 1, wherein
2 said polymerization is a mass polymerization, a suspension polymerization or a
3 polymerization in organic solvents.

1 7. In a coating slip wherein a polymeric binder is employed, the
2 improvement comprising selecting as at least one polymeric binder, a silane-
3 containing polyvinyl alcohol of claim 1.

1 8. In a coating slip wherein a polymeric binder is employed, the
2 improvement comprising selecting as at least one polymeric binder, a silane-
3 containing polyvinyl alcohol of claim 2.

1 9. In a coating slip wherein a polymeric binder is employed, the
2 improvement comprising selecting as at least one polymeric binder, a silane-
3 containing polyvinyl alcohol of claim 3.

1 10. In a coating slip wherein a polymeric binder is employed, the
2 improvement comprising selecting as at least one polymeric binder, a silane-
3 containing polyvinyl alcohol of claim 4.

1 11. In a coating slip wherein a polymeric binder is employed, the
2 improvement comprising selecting as at least one polymeric binder, a silane-
3 containing polyvinyl alcohol of claim 5.

1 12. A coating slip-coated substrate, comprising a substrate and the
2 coating slip of claim 7.

1 13. The coating slip-coated substrate of claim 12, wherein the
2 substrate comprises paper, plastics-coated paper, or a plastics foil.

1 14. The coating slip-coated substrate of claim 12, wherein the
2 substrate is paper.

1 15. The coating slip-coated substrate of claim 12, wherein said
2 coating slip-coated substrate is suitable for use in ink jet printing.

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